

**Specification:**

**Title of Invention**

**Connected Online Reactive Advertising Liteboard ( CORAL )**

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**Cross-reference to related applications:**

**Related Applications:**

**This application claims priority to U.S. Provisional Patent Application Nos. 53564002 filed 2-2-2004 , having the title " Connected Online Reactive Advertising Liteboard ( CORAL )**

**Statement regarding federally sponsored research or development:**

**No federally sponsored or research or development funds were used.**

**Reference to Microfiche appendix:**

**None**

**Background of the Invention :**

**This is the Age of convergent Video and Broadband Network Topologies. The delivery of Advertising information is most useful when delivered to the right person at the right time by an automatically upgradeable software AI application generating targeted advertising based upon demographics , telemetry data from the sensor array and user interaction. Now with the sensitized computer or sensitized PDA or Coral Unit that advertising information delivery can be made without target interacting or making any initiating entry. The ads are delivered as POP UP windows with audio and sensory elements co-delivered reactively to presence of a target. The AI program classifies the target based upon stored elements matched to realtime sensory information. Delivery of the right information to the right person has been a problem that many businesses have attempted to solve over the years. Indeed an entire industry called advertising emerged. The digital Video and broadband convergence and higher processor speeds has changed the the delivery methodology available. The WWW and the TV have provided a way to deliver content rich information based on viewer choices. The ability to choose depends upon the target selecting a particular activity. CORAL is a novel independent advertising display device that chooses content based on telemetry received from the environment around it. The surrounding environment of PDA/Phone will allow for biometric monitoring of the human body. Now this novel patent seeks to deliver information based on computer analysis of it's surroundings and interpretations made about the existance and type of targets in it's immediate surroundings**

combined with a robust kiosk platform designed for the task and as a conduit to varied network topologies.

## Summary of the Invention:

### Field of invention

This invention relates to an apparatus system and method in which a sensor array generates telemetry which is manipulated by a AI application on a computer and matched to stored database records and produces a tailored advertising display for the target client passing in front of or near the CORAL Unit or/and provides a way to access more information or/and access other networks such as the PSTN (public switched telephone networks) and/or make emergency alerts to fire and ambulance for assistance.

Coral is a novel advertising delivery system based upon sensory data received by the sensor array of the Coral unit. That sensor unit can be configured in multiple configurations both stand alone and surface mounted like a picture frame and outdoors as a part of a free standing unit on sidewalks. The unit works in conjunction with Coral software and a computer which together exhibit the ability to react to telemetry and select and display advertising stored. The selection of ads is based upon the product of the algorithm based software. ( a model match with a some degree of certainty)

The Coral unit may be described as “Advertising displays ( flat panels ) that have sensory telemetry processed from attached sensor array ( (audio, video, radio , ) multispectrum (UHF ,VHF etc),, motion , distance , Temperature , humidity , chemical analyser ( hormone ) , gas (CO , O, CO2), microphone , pressure , altitude , GPS , IP connected and processed by a logarithmic computer program with AI capabilities ) and will determine the most appropriate advertising to be displayed. Eg. ( young short petite female walking past fast would be exposed to an Ad for pump shoes by short catchy audio video clip combined with a blue tooth ad signal , low power radio (am)) , or ( young tall male approaching slowly would get a involved lengthy catchy ad for basketball sneakers by short catchy audio video clip combined with a blue tooth ad signal , low power radio (am)).”

Sensor array consists of motion detectors, digital video / infrared camera , photocell, microphone, speakers , chemical analyser , gas sensor (O, CO,CO2) , chemical dispenser ( hormone , fragrances), infrared reciever , infrared transmitter, noise cancelation ability , light , raised lettering for blind , laser pointer , card reader strip and tumbprint sensor.

The Novel Coral Unit Decerner Application (CUDA) takes a series of fixed digital images or digital video image and first process the image to distinguish and outline the moving elements between frames versus the fixed background elements. The moving elements would further be process into form elements consistant with and

matched to model element image files ( ie.stick figure representations, fat , thin, tall ,short, female voice etc. ) stored in a storage device in a Novel Database Of Recognized Images ( DORI). The DORI scores are rated on percent of match. DORI can be locally stored and updated by over the air (digital, video, Infrared, radio) or by a connected network ( intranet ,internet or proprietary network ) to update advertising databases or transmit usage and billing information.

The Second Novel component is a Coral Unit Database Scheme (CUDS) that would establish matching variables for the Models (male , female , long hair , slim , fast walk , run , standing, bleeding, staggering, gesturing(sign language) etc. ) and used to select ads to be displayed to target models. Advertisers would develop Ads according to set profiles aimed at appropriate end users. The Coral unit computer would display Ads by profiles based upon the sensor array data and the matching oft target model elements.

The software application includes a display region used for POP UP advertising that is downloaded from the computer or from the internet. Ad selection is based upon the telemetry of the sensor array. The advertising displayed can vary based upon sensory perception of the local environment and matching models found by the AI programming. The pop ups can be one dominant full screen or multiple shared screen for a varied audience. Simultaneous Bluetooth transmissions of ads to individual PDA/Phone computing devices.

Therefore, existing systems do not provide an intergrated and readily available method for realtime sampling of the surrounding environment and displaying information and advertising content catered to that realtime sensory data recieved. Coral may decide by it's AI programming to contact 911 ( older male supine immobile lowering body temperature). Coral can be miniturized for use in personal assitants or phones of any type. Can communicate by bluetooth or proprietary low frequency radio or infrared in addition to or instead of tactile, audio and microphone input.

Adding or incorporating a miniturized Coral sensory array to PDA/Phone computing device will allow the biometric monitoring of the human body for health monitoring and triggering emergency calls when the human body becomes incapacitated. The normal Coral , DORI and CUDS functionality will apply based on available connectivity.

Other patents are superceded by the novelty

U.S. Pat. No. 5,347,632 to Filepp et al. discloses a reception system in which both user demographics and individual system usage information can be used to target *advertising*. However, this information is used to select which advertisements are to be placed into an advertisement queue from which advertisements are then accessed, apparently in the order in which they were placed in the queue. Thus, this system permits targeting of *advertising* generally, but does not provide real time targeting of *advertising* based upon user actions.

U.S. Patent No. 6,771,290 to Hoyle et al. discloses a method and apparatus for providing an automatically upgradeable software application alone, which includes targeted advertising based upon demographics and dependant on user interaction with the computer. These systems are dependant on user interaction to launch whereas the subject application of CORAL is launched by computer analysis of sensor array telemetry.

Internet users typically employ browser applications and related technologies in order to access the WWW; and to locate and view files, documents and audio/video clips. Exemplary browser applications include Opera by Opera Software, Netscape Navigator, Netscape Communicator 4.6 and Microsoft Internet Explorer 5.0., Mosaic, Browser applications are loaded onto a user's computer, and then can be used for communication over networks using protocols such as that utilized by the WWW. Browsers are useful for accessing desired files and web sites, and have the capability of storing information regarding visited or favorite web sites on the user's computer. However, it has been common practice for browsers to be employed by the user for fairly limited purposes, such as accessing information. Certain applications, such as Windows XP, Windows NT 4.0, LINUX, allow a user to receive and store electronic information on a limited network system. However, the usefulness and flexibility of such systems are severely limited, because each browser installation traditionally has been independent of other browser installations to which a user has access. Thus, information within one browser is not easily transportable to the other browser.

The Coral unit additionally acts as an interface or connection between computing devices and the world of broadband connected and on air networks. Delivering targeted advertising and acting as an interface to networks like the PSTN.

#### Definitions

Except as may be explicitly indicated otherwise, the following definitions shall apply:

**browser**--A program that can communicate over a network using http or another protocol and that can display html information and other digital information.

**client computer**--A computer that is connected to a network (including computers that are connected only occasionally to the network such as, for example, by a modem and telephone line) and that can be used to send requests for information to other computers over the network.

**computer**--An apparatus having a processing device that is capable of executing instructions, including devices such as personal computers, laptop computers, and personal digital assistants, as well as set top television boxes, televisions, radios, portable telephones, and other such devices having a processing capability.

**computer usage information**--Data concerning a person's use of a computer, including such things as what programs they run, what information resources they access, what time of day or days of the week they use the computer, and so forth.

**data set**--A group of data items; for example, links, keywords, or entries in an address book.

**display object**--Data capable of display by a computer, including graphical images as well as multimedia presentations or other display data that includes audio in addition to visually-perceived data.

**file**--Any digital item, including information, documents, applications, audio/video components, and the like, that is stored in memory and is accessible via a file allocation table or other pointing or indexing structure.

**graphical image**--Visually-perceived data stored in a graphic format (e.g., jpeg, gif, bmp, tiff, pcx, etc.), including electronically-reproduced photographs, graphics, animations, icons, and textual messages.

**information resource**--A source of information stored on a server or other computer that is accessible to other computers over a network.

**keyword**--A textual data item used in locating related sources of information

**link**--A data item that identifies the location or address of a program or information resource. A URL is a link, as is a path and filename of an information resource.

**network**--A system having at least two computers in communicable connection, including intranets, personal networks, virtual private networks, and global public networks such as the Internet.

**non-volatile data storage device**--A memory device that retains computer-readable data or programming code in the absence of externally-supplied power, including such things as a hard disk or a floppy disk, a compact disk read-only memory (CDROM), digital versatile disk DVD), magneto-optical disk, and so forth.

**profile**--User-specific information relating to an individual using a computer.

**program component**--A set of instructions stored in a file in computer-readable format, whether as object code or source code, and whether written in a compiled language, in byte code (such as Java.TM.), or in a scripting or other interpreted language.

**program module**--One or more related program components.

**program--One or more related program modules.**

**reactively--In response to some type of user input, such as a mouse click on a particular user application or on a link to an information resource**

**server--A computer on a network that stores information and that answers requests for information.**

**software application--A program and associated libraries and other files; for example, a word processing application, a spreadsheet application, or a personal information management application.**

#### **Additional aspects of the invention**

**CORAL unit allows for connection to the Internet, PSTN, VNAP/like word recognition software, Video on Demand or stand alone computing requirements.**

**Miniturized sensor array can be used to measure and record biometric sensory data to determine the health of the user or to summon help should the tlemetry indicate incapacity in an emergency situation. Low oxygen, low/high blood pressure, low /high temperature, low or high pulse conditions that could point to emergency situations requiring emergency medical care. The unit being GPS capable can make emergency calls and notify authorities on percieved health emergencies.**

**The Target may choose to interact with panel by voice, sign (gesture) , touch ,typing , mouse , joystick ( interface device) or bluetooth input or output to get a response and additional information.**

#### **Brief description of the several views of the drawings :**

**Diagram 1: CORAL Kiosk Model: contains all the hardware components in a rugged outdoor/indoor standalone format. These model will vary by how rugged the design is. The difference will be in composition of the external components steel vs composite stone or plastics or polycarbonate or plexiglass or combinations thereof. The basic components of the sensory array frame the video display. The input devices also frame the display. The computer and storage devices and peripherals and tranmission equipment below, within and behind the body of the unit along with a power supply , backup and communication connections devices. Units can be dual sided or more depending on configuration required.**

**Diagram 2:CORAL Kiosk Frame Model:**  
**contains all the hardware components in a rugged outdoor/indoor Frame format. These model will vary by how rugged the design is. The difference will be in composition of the external components steel vs polycarbonate or plexiglass. The basic components of the sensory array frame the video display. The input devices also frame the display. The computer and storage devices and peripherals and**

transmission equipment within and behind the body of the unit along with a power supply , backup and communication connections devices. Units can be dual sided or more depending on configuration required.

**Diagram 3: CORAL computer unit:**

The sensory array is packaged to be an add-on to computer systems or intergrated into PDA or Displays. The basic components of the sensory array frame the video display. The input devices also frame the display. The computer and storage devices and peripherals and tranmission equipment within and behind the body of the unit along with a power supply , backup and communication connections devices.

**Diagram 4: Block diagram of CUDA:** Is a method and process of combining and comparing video , dual source motion detectors , laser light transmitter and receiver for distance, audio and microphone for distance and sound pitch and sound base, pressure sensors for vibrations, chemical analysers for hormone and key chemical (co,co2,h20,hc,o)

**Diagram 5: Block diagram of CUDS:**

establish matching variabed for the Models (male , female , long hair , slim , fast walk , run , standing, bleeding, staggering, gesturing(sign language) etc. ) and select ads to be displayed to target models. Advertisers would develop Ads according to set profiles for aimed at appropriate end users. The Coral unit computer would display Ads by profiles based upon the sensor array data and the matching target model elements.

**Diagram 6: DORI:**

into form elements consistant with and matched to model element image files ( ie.stick figure representations, fat , thin, tall ,short, female voice etc. ) stored in a storage device in a Novel Database Of Recognized Images ( DORI). The DORI scores are rated on percent of match. DORI can be locally stored and undated by over the air (digital, video, Infrared, radio) or connected by network ( intranet ,internet or proprietary network ) to update advertising databases or transmit usage information.

**Diagram 7: Kiosk relay and mapping:**

A series of closely positioned CORAL Kiosks are engaged in mirroring of a link to data somewhere on the connected networks for the use and access of a mobile computing user device with predictive transfer of the link in the direction of travel by the computing user device.

**Diagram 8: PDA/laptop/phone add-on or intergration:**

Pda/laptop/phone computing device with an intergrated miniturized sensor array carried on the person with direct or near direct contact to the user body. A low fequency or bluetooth connection to a PDA/laptop/phone for access to network elements or monitoring of biometric information for health diagnosis , medical emergencies reasons or to transmit advertising to the end user computing device.